

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-002309**Date Inspected:** 10-May-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 2300**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 800**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Changxing Island

<b>CWI Name:</b>	Jiang Jian Fei	<b>CWI Present:</b>	Yes	No
<b>Inspected CWI report:</b>	Yes No N/A	<b>Rod Oven in Use:</b>	Yes No N/A	
<b>Electrode to specification:</b>	Yes No N/A	<b>Weld Procedures Followed:</b>	Yes No N/A	
<b>Qualified Welders:</b>	Yes No N/A	<b>Verified Joint Fit-up:</b>	Yes No N/A	
<b>Approved Drawings:</b>	Yes No N/A	<b>Approved WPS:</b>	Yes No N/A	
		<b>Delayed / Cancelled:</b>	Yes No N/A	
<b>Bridge No:</b>	34-0006	<b>Component:</b>	OBG and Tower	

**Summary of Items Observed:**

Caltrans Quality Assurance (QA) Inspector, Larry Viars was present observe production welding and monitor Magnetic Particle Testing (MT) of Tower components, for the San Francisco Oakland Bay Self Anchored Suspension Bridge, at Zhenhua Port Machinery Company (ZPMC) facility on Changxing Island.

The Caltrans QA Inspector observed ZPMC welder Mr. Xue Yian and Ms. Shen Mei performing Submerged Arc Welding (SAW) on Tower Skin plate E Sub assembly SA216 for East Tower in the 1G position. A total of 6 plates were part of the weld joint, P789E, P788E, P790E, P91, P609 and P36. A total of 4 Complete Joint Penetration (CJP) welds were within the continuous weld joint and 4 Partial Joint Penetration (PJP) welds. Two Welding procedure specifications were posted for the above mentioned fill pass, WPS-B-T-2221-B-U3C-S (CJP), and WPS-B-T-B-P3-S (PJP). The following welding variables were recorded, amperage 642, volts 33, travel speed 670, with a heat input of 1.89 kJ/mm. The above mentioned welding appeared to meet the requirements of AWS D1.5 (2002) and applicable contract documents.

The Caltrans QA Inspector observed ZPMC welder Ms. Zhai Qingshen performing Submerged Arc Welding (SAW) on the South Tower Skin plate E Sub assembly SA107 A/J in the 1G position. Weld joint SSD1-SA107 A/J 17A, plate P882 to P456-1. The Complete Joint Penetration (CJP) weld appeared to be in conformance with the posted welding procedure specification, WPS-B-T-2221-B-U3C-S for the cover and fill passes. The following welding variables were recorded, amperage 688, volts 32.8, travel speed 630, and a heat input of 2.149 kJ/mm.

The Caltrans QA Inspector monitored ZPMC Quality Control (QC) Mr. Botin Rui perform Magnetic Particle Testing (MT) of the South Tower Skin Plate B root pass welds, CJP weld SSD1-SA178-B/K 12, and PJP

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SSD1-SA178 B/K welds 4A and 14A were tested. Testing appeared to be in general conformance with AWS D1.5 (2002) and contract documents. No relevant indications were reported. Please see the photo below of ZPMC MT.



### Summary of Conversations:

No relevant conversations occurred this date.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Viars,Larry	Quality Assurance Inspector
<b>Reviewed By:</b>	Cuellar,Robert	QA Reviewer

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